Personality and Social Psychology Bulletin
http://psp.sagepub.com/

Motivating Behavioral Persistence: The Self-As-Doer Construct

Linda Houser-Marko and Kennon M. Sheldon

Pers Soc Psychol Bull 2006 32: 1037
DOI: 10.1177/0146167206287974

The online version of this article can be found at:
http://psp.sagepub.com/content/32/8/1037

Published by:

http://www.sagepublications.com

On behalf of:

Society for Personality and Social Psychology

Additional services and information for *Personality and Social Psychology Bulletin* can be found at:

Email Alerts: http://psp.sagepub.com/cgi/alerts

Subscriptions: http://psp.sagepub.com/subscriptions

Reprints: http://www.sagepub.com/journalsReprints.nav

Permissions: http://www.sagepub.com/journalsPermissions.nav

Citations: http://psp.sagepub.com/content/32/8/1037.refs.html

>> Version of Record - Jul 21, 2006

What is This?

Downloaded from psp.sagepub.com at University of Missouri-Columbia on July 19, 2014

Motivating Behavioral Persistence: The Self-As-Doer Construct

Linda Houser-Marko
Kennon M. Sheldon
University of Missouri–Columbia

Why do some people persist in goal pursuit, even in the face of boredom or setbacks, whereas others quickly give up their goals? In this research, the authors introduce a new motivational construct, the "self-as-doer," to explore this question. Studies 1 and 2 found longitudinal evidence that those who more strongly endorse doer statements regarding their goals (i.e., exerciser, dieter, runner) show greater behavioral persistence and attainment regarding such goals, even controlling for other relevant constructs such as expectancy, self-concordance, commitment, and neuroticism. Study 3 used priming to make the self-as-doer momentarily accessible, finding an interaction such that those who read The Little Engine That Could *(vs.* Curious George*) and wrote an essay applying the story's message to themselves (vs. others) showed the greatest persistence in physically demanding tasks. Implications for sustained motivation of all kinds are discussed.*

Keywords: *personal goals; persistence; self-as-doer; motivation*

Consider a person who runs on a regular basis—running is simply a part of her routine, something she does nearly every day, even on days when she does not really feel like it. When we ask this person what keeps her going, she says, "I am a runner—that's what I do." For her, the question of *whether* she will run does not exist; instead, the question is *when*.

The central premise of the current research is that having such an identity—as a "doer" of an action or goal—helps people to persist in their goal-directed behavior, even in the face of boredom, difficulties, or failure. Thus, they are enabled to be successful in long-term goals, such as dieting, exercising, and studying, even though such behaviors may not be enjoyable to perform. As will be discussed below, defining oneself as a doer means linking one's identity with the mere process of behaving, independently of outcomes. Thus, having an accessible doer identity provides people with an important motivational resource, a resource that has not been explicitly recognized by existing theories. We consider the nature of this resource below.

THE SELF-AS-DOER COMPARED TO OTHER SELF-MOTIVATIONAL CONSTRUCTS

To elaborate on the self-as-doer construct, we first discuss some related theoretical perspectives, showing how the construct goes beyond prior constructs. One potentially relevant perspective is supplied by the self-concordance model (Sheldon, 2002; Sheldon & Elliot, 1999; Sheldon & Houser-Marko, 2001), which is based on self-determination theory (Deci & Ryan, 1985, 2000). According to this model, people persist longer in goals when they feel autonomous in doing them, that is, when they enjoy the very process of pursuing the goal (intrinsic motivation) and/or when they identify with the terminal values represented by the goal (identified motivation). Obviously, the case of the dedicated runner (who runs even on days she does not want to) cannot be explained simply by the concept of intrinsic motivation. The concept of identified motivation is more relevant here (Sheldon, Williams, & Joiner, 2003) because an early morning run may be endured for the sake of an important terminal value (such as "being healthy"). However, we suggest that the self-as-doer construct may supply additional explanatory power because

Authors' Note: Please send correspondence to Kennon M. Sheldon, 210 McAlester Hall, Psychological Sciences, University of Missouri–Columbia, Columbia, MO 65211; e-mail: SheldonK@missouri.edu.

PSPB, Vol. 32 No. 8, August 2006 1037-1049
DOI: 10.1177/0146167206287974
© 2006 by the Society for Personality and Social Psychology, Inc.

Downloaded from psp.sagepub.com at University of Missouri-Columbia on July 19, 2014

it involves identifying with the process of behaving itself as well as with the longer-term values being served by behavior. Thus, the doer construct may help explain persistence in cases where behavior does not express strong values or a long future time perspective.

Self-efficacy theory (Bandura, 1997) provides another self-based perspective on sustained motivation. As shown in many different studies, those who believe that they have the personal resources to succeed in their efforts show greater goal persistence and performance (Bandura, 1989). However, we suggest that the doer construct concerns something different from self-efficacy. Instead of addressing positive future expectancies or a belief in one's abilities, the self-as-doer construct addresses one's identification with the *doing* of an action. Thus, the doer construct may help to explain persistence in cases where people do not have high skills, abilities, or reasons to expect success.

Implementation intentions theory provides another related construct (Gollwitzer & Brandstatter, 1997; Gollwitzer, Fujita, & Oettingen, 2004). According to this perspective, successful action is facilitated when participants link the concept of action to a specific future situation. Creating this kind of contingency enables people to act automatically when the given situation is encountered, without having to consciously intend to do so. However, we suggest that the self-as-doer construct also is different from the implementation intention construct. The self-as-doer involves linking the sense of self with the doing of certain behaviors, whereas implementation intentions involve linking a particular future situation with the doing of certain behaviors. In other words, implementation intention processes do not directly implicate personal identity, whereas doer identification does.

Finally, it is worth considering the overlap of the self-as-doer construct with the construct of habit (Wood, Tam, & Witt, in press). Wood and Quinn (2005) defined a habit as "an efficient mode of performance that is triggered by temporal and contextual cues that have been associated with the response in the past. In contrast, acting intentionally requires a conscious decision, and sometimes effort and ability" (p. 55). Thus, habits are somewhat similar to implementation intentions in that, for both, a particular situation can trigger an automatic behavioral response; the difference is that implementation intentions require a conscious act to initiate (i.e., they are habits-in-training), whereas habits need no further conscious input. Neither construct, however, refers to the linking of the sense of self (i.e., as a person with a particular identity) with the doing of a particular activity, that is, the feeling of being a "runner," a "persister," or an "achiever." Again, we suggest that this can provide unique motivational resources.

CONCEPTUALIZING THE SELF-AS-DOER CONSTRUCT

To better explain why the self-as-doer construct should have unique effects that go beyond existing constructs, we now consider the construct itself in more detail. Ultimately, the self-as-doer construct is defined in terms of the accessibility of a particular type of self-concept, in which action and the self are linked in working memory. Thus, the self-as-doer is more than a particular behavior, goal, or intention considered by itself and more than the self considered by itself; rather, it is an activated combination of these. Schlenker and colleagues' (Schlenker, Britt, Pennington, Murphy, & Doherty, 1994; Schlenker, Pontari, & Christopher, 2001) triangle model of responsibility illustrates the importance of such a linkage. In this model, social prescriptions are more likely to be performed when the person has linked his or her identity with the prescription or ideal.[1] Identity-prescription linkages impel action because the agentic self is causally implicated in the performance of the action; the person is responsible for that action. In contrast, when prescriptions are not linked with identity, then the person is less likely to perform them, even though he or she may be very aware of them. In these studies, we assumed that this aspect of Schlenker et al.'s (1994, 2001) model of responsibility-taking should apply to personal goals as well as to social prescriptions.

Notably, our definition of the self-as-doer as a cognitive linkage between the self and action is rather general. Because of this, self-as-doer concepts can potentially vary on a number of dimensions. For example, self-as-doer images can range from being chronically accessible and stable individual differences, akin to personality traits, to being more acutely accessible and transient factors, akin to context effects. Thus, the concept might be applied in the domains of both personality and social psychology, consistent with Higgins's (1990) discussion of accessibility (i.e., momentary vs. chronic) as a common language for the two disciplines. In addition, self-as-doer images can range from being very broad and global, implicating the self as a whole, to being very narrow and specific, implicating the self in very particular domains of life. Thus, the concept can have relevance for explaining very general outcomes and processes as well as very specific outcomes and processes (as in Studies 1 and 2, herein). Finally, the type of action involved can vary, ranging from imposed social obligations and duties (Schlenker et al., 2001) to self-generated goals and intentions (Sheldon & Elliot, 1999) to specific behaviors that are merely primed by the environment (Bargh & Ferguson, 2000). Thus, the concept can have relevance for understanding many types of motivated behaviors. In these studies,

Downloaded from psp.sagepub.com at University of Missouri-Columbia on July 19, 2014

we provide evidence regarding all of these dimensional differences.

THE CURRENT STUDIES

We conducted three studies to investigate the self-as-doer construct and its effects. Studies 1 and 2 explore the self-as-doer construct as an individual difference variable. We examined this variable as a predictor of goal-related persistence and attainment in both broad and domain-specific areas of life. We hoped to show that the construct has effects that are not reducible to those of existing personality and motivational constructs and that the effects also go beyond the effects of past experience and success in the behavior. Study 3 explores the self-as-doer construct as a state that can be primed by the environment. We hoped to support our claim that doer-identification effects require an explicit linkage between the self and the action by showing that the most physical endurance results when both self and action are activated together prior to the endurance test.

STUDY 1

Study 1 focused on participants' idiographic personal goals, which were assessed throughout the course of their first academic semester and also were reassessed 3½ years later as they neared graduation. During the first semester, we asked participants to create "doer phrases" for each of their various goals and then to rate their endorsement of the phrases.

We tested four basic hypotheses. The first was that strong doer identities for personal goals would predict a greater sense of having identified with the process of striving, as measured retrospectively at the end of the semester. This was intended to help validate an important theoretical assumption regarding the self-as-doer construct. Our second and most important hypothesis was that strong doer identities would predict greater longitudinal goal–attainment during the semester, independent of relevant existing motivational and personality constructs. This was based on the assumption that doer identities provide a unique motivational resource that is not captured by existing constructs. Our third hypothesis was that strong doer identities would predict correct memory for one's personal goals 3½ years later, controlling for the existing constructs. This was based on the assumption that doer identities reflect enduring and chronically accessible aspects of identity. Our fourth hypothesis concerned a more specific life domain, that of college grades. We hoped to show that strong doer identities regarding academic goals in particular would predict better grades throughout the college career, controlling for American College Test (ACT) scores.

Again, we intended to control for both motivational and personality constructs to show that doer identification provides additional motivational resources above and beyond their effects. As alternative motivational constructs, we assessed self-concordance (Sheldon, 2002), future expectancy (Bandura, 1989), and felt commitment (Brunstein, 1993), all of which have been shown in the past to be predictive of goal effort and attainment (Bandura, 1989; Brunstein, 1993; Sheldon & Elliott, 1999; Sheldon & Houser-Marko, 2001). As alternative personality constructs, we examined the two Big Five traits of Neuroticism and Openness to Experience (McCrae & Costa, 1990). It has become near-standard practice to control for Neuroticism when validating new trait constructs relevant to mood and well-being (Fortunato & Goldblatt, 2002; Mroczek, Spiro, Aldwin, & Ozer, 1993) because response biases associated with Neuroticism may drive many such effects. Also, those higher in Openness to Experience may have greater ability to adopt and enact new goals (Thoreson, Bradley, Bliese, & Thoreson, 2004), perhaps accounting for doer-identification effects.

METHOD

Participants

Participants were 194 first-year students at the University of Missouri, Columbia, who were recruited at the beginning of the academic year either by mail or through their introductory psychology courses for a longitudinal study that was to occur throughout their 1st year. One hundred sixty were female and 34 were male.[2] Participants received $20 for their participation in the first phase.[3] In April of their senior year (i.e., 3½ years after the initial data collection), 97 of the original participants completed another questionnaire in exchange for $25.

Hypotheses 1 and 2 were tested using the 194 students who completed the first questionnaire of the semester as well as a midsemester and end-of-semester questionnaire. Hypotheses 3 and 4 were tested using the 97 participants who also completed a senior-year assessment, described below.

Procedure

Participants came to the laboratory to complete the first questionnaire, which was administered within the first 2 weeks of the first freshman semester. During this session, they were asked to generate and rate a set of eight personal goals for the semester. Midway through the semester, we mailed participants a short questionnaire that assessed doer identification (described below).

Downloaded from psp.sagepub.com at University of Missouri-Columbia on July 19, 2014

At the end of the semester, participants came to the lab to answer questions about goal attainment and process identification. Three and a half years later, participants were sent a questionnaire that assessed their memory for their initial goals as well as their final grade point averages (GPAs).

Measures

Goal generation. During the first assessment, participants were given a description and examples of personal goals and were asked to list eight goals that they would pursue "at least through the end of the semester." Personal goals were defined as "projects that we think about, plan for, carry out, and sometimes (although not always) complete or succeed at." Examples of goals listed by participants include "get good grades," "don't gain weight," and "call my parents once a week."

Self-concordance. Participants also rated their goals regarding four reasons for goal pursuit using a scale ranging from 1 (*not at all for this reason*) to 9 (*completely for this reason*). The four reasons were external (you strive for this goal because someone else wants you to or the situation forces you to), introjected (you strive for this goal because you would feel ashamed, guilty, or anxious if you didn't), identified (you strive for this goal because you believe this is an important and valuable goal to have), or intrinsic (you strive for this goal because of the enjoyment or stimulation that the goal provides you). As in previous research (Sheldon & Elliott, 1999; Sheldon & Houser-Marko, 2001; Sheldon & Kasser, 2001), an aggregate self-concordance score was computed by summing the means of the eight identified and eight intrinsic ratings and then subtracting the means of the eight introjected and eight external ratings (Cronbach's α was computed to be .88 for this 32-item variable after introjected and external ratings were reversed).

Commitment. Participants responded to the following question for each goal, "How committed do you feel to this goal?" A scale of 1 (*not at all*) to 7 (*extremely*) was used. An aggregate commitment score was computed by taking the mean of the eight goal ratings (Cronbach's α was .73 for this eight-item variable).

Neuroticism and Openness. During the first assessment, participants also completed the Neuroticism and Openness to Experience scales of the NEO-FFI (Costa & McCrae, 1992), each of which contains 12 items. Summary scores were computed for each construct after appropriate recoding (αs = .86 and .76, respectively).

Self-as-doer. During the midsemester questionnaire, participants were asked to create a doer phrase for each goal. Instructions read as follows:

> Every personal goal contains both a *verb* and an *object*. For example, for the goal "get a 3.8 GPA," the verb is *get* and the object is *3.8 GPA*. For the goal "find a new boyfriend" the verb is *find* and the object is *boyfriend*. For the goal "decide on a major" the verb is *decide* and the object is *major*. Below, we would like you to think about the verb and object in each of your goals and then create a *special phrase* using the "er" suffix. This phrase will refer to *a person who does the goal*. For example, the goal "get a 3.8 GPA" might be rephrased "grade-getter." The goal "find a new boyfriend" might be rephrased "boyfriend-finder." The goal "decide on a major" might be rephrased "major-decider."

Participants wrote the doer phrase in a blank provided for each goal. Participants wrote phrases such as "good grade getter," "non-weight-gainer," "Bible reader," "positive outlooker," "relationship maker," and "emotion controller."

Participants were then asked to rate, "How well does the phrase describe or fit you?" A scale of 1 (*not at all well*) to 5 (*very well*) was used. An aggregate self-as-doer score was computed by taking the mean across the eight goals (Cronbach's α was .63 for this eight-item variable).

In addition, to predict senior GPA, an academic doer score was computed for each participant for whom we had senior GPA data by focusing only on first-semester academic goals. First, all goals were examined for each participant and the academic goals were flagged. Two participants had no academic goals, 73 participants had one goal, 17 participants had two goals, and 3 participants had three goals. An academic doer score was then computed by averaging across the academic goal-doer ratings.

Expectancy. Because expectancy seemed the most likely alternative variable to explain doer-identification effects, we chose to assess expectancy at the same time as doer identification, eliminating time of assessment as a potential confound. During the midsemester questionnaire, participants read, "How well do you expect to do on each goal in the next 3 weeks or so?" Each of their eight goals was rated on a 1 (*not at all*) to 7 (*very much*) scale. An aggregate expectancy score was computed by taking the mean of the eight goal ratings (Cronbach's α was .75 for this eight-item variable).

Goal-attainment. During the end-of-semester assessment, participants were asked to rate "How much total progress you have made on each goal, during the entire semester?" and "How effective have you felt in pursuing each goal, during the entire semester?" both with 1 (*very little*) to 7 (*very much*) scales. These 16 ratings were combined into a single goal-attainment composite (Cronbach's α was .78).

Downloaded from psp.sagepub.com at University of Missouri-Columbia on July 19, 2014

Process identification. During the end-of-semester assessment, participants read,

> Most of us think about the "end-state" of our goals, that is, the place we hope to get or the achievement we hope to attain by pursuing the goal. In this question, we would like to know how you felt about the *process* of pursuing the goal, that is, the "journey itself." Putting the desired end-state aside, how did it feel to be *doing* the goal? Specifically, how much did you identify with this process, that is, to what extent was engaging in this process an expression of "who you really are?"

The same scale was used as above and the eight ratings were averaged (Cronbach's α was .69 for this eight-item variable). Again, this measure was viewed as helping to provide construct validation for the doer-identification measure.

Senior memory. Included within the senior questionnaire was a list of 25 goals, which included 17 standard decoy goals as well as the participants' original 8 goals, all at standard positions. Participants were asked to try to pick out their original 8 goals. We computed a count of the number correct for each participant.

Final GPA. The senior questionnaire also asked participants to list their aggregate GPA at that point. Four of the 97 participants did not supply this information. Also, 3 participants did not have ACT score information, an important covariate. Thus, 90 participants were left to test Hypothesis 4.

RESULTS

Descriptive Statistics

Table 1 provides descriptive statistics for all of the study variables. Table 2 provides correlations between all of the study variables.

TABLE 1: Study 1: Descriptive Statistics

Variable	M	SD	N
Doer identification	3.86	0.61	195
Self-concordance	5.93	4.09	195
Commitment	5.78	0.72	195
Expectancy	5.30	0.90	195
Neuroticism	2.68	0.71	195
Openness to Experience	3.41	0.62	195
Process identification	5.53	0.90	195
Goal attainment	4.86	0.93	195
No. recognized senior year	6.96	1.13	100
Final grade point average	3.37	.42	96

Hypothesis Tests

We conducted four hierarchical regressions, one for process identification, one for first semester goal attainment, one for number of goals recognized in the senior year, and one for senior GPA, in which the alternative variables were entered at the first step and doer identification at the second step. We hypothesized that doer identification would yield a significant R^2 change in every model. In the senior GPA analysis, we also entered students' ACT score (which was supplied by the university registrar) to control for general academic ability.

Table 3 shows results for the four regression models, presenting the coefficients calculated at the second step. In the first semester longitudinal models, midsemester doer identification accounted for unique variance in process identification (Step 2 $R^2 = .16$, $p < .01$; R^2 for the entire model = .53), $F(6, 187) = 35.33$, $p < .01$, and end-of-semester goal attainment (Step 2 $R^2 = .023$, $p < .01$; R^2 for the entire model = .56), $F(6, 187) = 39.70$, $p < .01$, as hypothesized. Expectancy also was a significant positive predictor in the goal-attainment analysis, and Neuroticism was a significant negative predictor; commitment also was a contributor in the process identification analysis, and expectancy was a marginally positive predictor. Turning to the senior data: although doer identification was significantly correlated with correct memory (see Table 2), it was not significant when added to the correct memory analysis at the second step ($R^2 = .021$, $p < .16$; R^2 for the entire model = .04), $F(6, 90) = .76$, $p > .50$, although the drop in the coefficient from .20 to .18 was only modest and none of the other predictors were significant. Academic goal doer identification was significant in the senior GPA analysis (at Step 2, $R^2 = .12$, $p < .01$; R^2 for the entire model = .27), $F(7, 82) = 35.33$, $p < .01$, as hypothesized. ACT score was a marginally significant positive predictor in the latter analysis. Notably, the academic doer-identification measure was a much stronger predictor of senior GPA ($r = .49$, $p < .01$) than the generic doer-identification measure ($r = .29$, $p < .01$, as shown in Table 2).

BRIEF DISCUSSION

Study 1 found that doer identification predicted the longitudinal attainment of personal goals, consistent with our assumption that such identification promotes sustained successful striving. Of importance, these effects emerged even when the effects of three existing motivational constructs, namely, goal commitment, expectancy, and self-concordance, and also two relevant personality trait constructs, namely, Neuroticism and Openness, were statistically removed. In addition, doer identification also was strongly associated with a measure

Downloaded from psp.sagepub.com at University of Missouri-Columbia on July 19, 2014

TABLE 2: Study 1: Correlation Table

	1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*
1. Doer identification	1								
2. Self-concordance	.31**	1							
3. Commitment	.37**	.31**	1						
4. Expectancy	.58**	.27**	.43**	1					
5. Neuroticism	−.14†	−.23**	−.07	−.18*	1				
6. Openness	−.04	.02	−.12†	−.10	−.13	1			
7. Process identification	.67**	.32**	.49**	.52**	−.08	−.06	1		
8. Goal attainment	.55**	.31**	.38**	.69**	−.33**	−.01	.56	1	
9. No. recognized as senior	.16*	.03	.10	.09	−.12	−.03	.19	.16	1
10. Final grade point average	.29**	.09	.05	.13	−.17†	.24*	.23*	.06	.14†

†$p < .10$. *$p < .05$. **$p < .01$.

TABLE 3: Study 1: Results of Hierarchical Regressions Predicting Four Outcomes From Doer-Identification and Alternative Constructs

	Process Identification	*Goal Attainment*	*Correct Memory*	*Final GPA*
Self-concordance	.07	.05	−.04	−.06
Commitment	.24**	.06	.06	.11
Expectancy	.12†	.51**	−.02	−.01
Neuroticism	.04	−.19**	−.12	−.07
Openness	.01	.03	−.05	.08
Doer identification	.50**	.19**	.18	.39**

NOTE: Final grade point average (GPA) analyses focus on rated doer identification for academic goals only. American College Test (ACT) score also was entered into the final GPA analysis; its coefficient was .21†. Coefficients are those that resulted at the second step.
†$p < .10$. **$p < .01$.

of the extent to which participants identify with the mere process of striving, just as our theory suggests. Furthermore, doer identification also correlated with the ability to recognize one's freshman goals 3½ years later, supporting our assumption that doer identities enhance accessibility. Finally, identifying with doer phrases regarding one's academic goals predicted higher graded performance throughout the academic career, beyond that predicted by ACT scores. The latter finding indicates that doer identification can have positive performance effects in particular domains of life as well as in life as a whole. The fact that the academic doer-identification measure better predicted senior GPA than did the generic doer-identification measure further supports the utility of considering doer identification as a domain-specific as well as a global predictor.

STUDY 2

Study 2 was similar to Study 1 in that it focused on participants' personal goals and was also a longitudinal study. We again asked participants to create doer phrases, one for each of three goals, and then to rate their endorsement of the phrases. As in Study 1, we hypothesized that doer identification would predict longitudinal attainment of the goals, over and above the variance accounted for by other important constructs.

However, there were five key differences between Studies 1 and 2. First, the participant's goals were all in the single domain of exercise. This allowed us to examine the importance of the construct in a particular health-relevant behavioral domain, in which persistence is a problem for many people. Consistent with our assumption that doer identification is relevant at various levels of domain specificity, we again expected it to have unique effects. Second, identification with the self-as-doer phrase was measured using three items per goal instead of one. This was intended to enhance the measure's reliability. Third, we evaluated the robustness of self-as-doer effects in comparison to self-esteem as well as Neuroticism because self-esteem also may influence the general positivity of participants' self-assessments (Marsh, Parada, & Ayotte, 2004). Finding doer-identification effects with self-esteem controlled would further buttress our argument that the self-as-doer provides unique personal resources. We again controlled for the motivational constructs of self-concordance and expectancy, hoping to show once again that doer-identification effects go beyond these more conventional constructs. Fourth, we controlled for whether participants had been pursuing these exercise goals prior to the study. We included this variable to test whether the self-as-doer effects represent more than past habits, in other words, might doer identification be an adoptable attitude that can contribute to persistence independently of prior experience within the domain? Finally, as one of our dependent measures, we assessed the weekly frequency of exercise. This allowed us to verify that the self-as-doer predicts a quantifiable behavior as well as predicting ratings of progress.

Downloaded from psp.sagepub.com at University of Missouri-Columbia on July 19, 2014

We hypothesized that identifying oneself as the doer of one's exercise goals would predict greater exercise success, as indexed by both frequency of exercise throughout an 8-week period and by ratings of overall progress in exercise goals throughout the same time period. These findings should emerge even when the alternative explanatory constructs of self-esteem, Neuroticism, having pursued the goal before, self-concordance, and expectancy are statistically controlled.

METHOD

Participants

Participants were students and staff at the University of Missouri, Columbia. They were recruited at the University Recreation Center or through introductory psychology courses. Introductory psychology participants were recruited on the basis of a stated intention to exercise during the semester. All participants were offered entry into a cash lottery as an incentive. Analyses revealed no significant main or interaction effects involving the two subsamples, so we combined them.

Fifty-four men and 74 women completed the first questionnaire. One hundred and two participants provided contact information and completed at least two follow-up questionnaires (see below) and constitute the final sample. The mean age was 20 years old, and ages ranged from 17 to 60 years old.

Procedure

Participants first read and signed a consent form. They then completed the first questionnaire, which included a request for contact information that would be used for follow-up questionnaires.

Four follow-up questionnaires were sent to participants throughout a period of 8 weeks. The first follow-up questionnaire was sent by e-mail 2 weeks following the first questionnaire, and the others were sent every 2 weeks thereafter. The outcome measures were derived by averaging across the responses received.

Measures

Goals. Participants generated three exercise goals. They were first given a description and examples of exercise goals and were asked to set three that they would be working on in the next few months. For their first goal, we asked them to set a goal of how many times per week (for a period of 20 min or more) they hoped to exercise. These responses ranged from 2 to 7 times per week. The other two goals were open-ended such that participants could list whatever exercise goals they wished. Examples of free response goals listed by participants were "build muscle," "burn fat," and "run five miles straight."

Self-as-doer. We asked the participants to create a doer phrase for each goal using the same instructions as those used in Study 1. Examples of listed phrases included "regular exerciser," "muscle builder," and "five-mile runner."

Participants were then asked to answer three questions relating to each doer phrase: "To what extent do you identify with the phrase?" "To what extent is the phrase consistent with your existing self-concept?" and "To what extent does the phrase describe you?" A scale of 1 (*not at all well*) to 7 (*very much*) was used. A single self-as-doer score was computed by taking the mean across the three goals and three questions (Cronbach's $\alpha = .86$).

Neuroticism. Participants rated their level of agreement or disagreement with 12 statements assessing Neuroticism (from the NEO-FFI, Costa & McCrae, 1992; a 1 to 7 scale was used). A Neuroticism score was computed by taking the mean of the 12 items after appropriate recoding (Cronbach's $\alpha = .85$).

Self-esteem. Participants rated their level of agreement or disagreement with 10 statements assessing self-esteem on a 1 to 7 scale (Rosenberg, 1965). A self-esteem score was computed by taking the mean of the 10 items after appropriate recoding (Cronbach's $\alpha = .86$).

Self-concordance and expectancy. These constructs were assessed via the same items employed in Study 1. As in Study 1, an aggregate self-concordance measure was computed by adding intrinsic and identified motivation and subtracting external and introjected motivation across the three goals (Cronbach's $\alpha = .78$ for this 12-item measure), and an expectancy score was computed by averaging the expectancy rating across the three goals (Cronbach's $\alpha = .77$).

Previous goal. We measured the degree that each was a previous goal by asking, "How long have you been working toward each goal?" using a 1 (*new goal*) to 6 (*more than 2 years*) scale. These ratings were averaged over the three goals (Cronbach's $\alpha = .74$).

Frequency of exercise. In the four follow-up questionnaires, we asked participants how many times they had exercised for 20 min or more throughout the past week. The responses were combined to create an average weekly frequency of exercise variable (Cronbach's $\alpha = .79$).

Goal progress. In each of the follow-up questionnaires, participants were asked to rate "How well are you doing in each goal?" using a scale of 1 (*not at all*) to 7 (*very much*). A goal-progress score was computed by taking the mean across the three goals and available follow-up responses (Cronbach's $\alpha = .88$).

Downloaded from psp.sagepub.com at University of Missouri-Columbia on July 19, 2014

TABLE 4: Study 2: Descriptive Statistics

Variable	M	SD	N
Doer identification	4.81	1.10	102
Neuroticism	3.32	0.98	102
Self-esteem	5.63	0.92	102
Self-concordance	4.22	3.65	102
Expectancy	5.30	1.04	102
Previous goal	3.58	1.45	102
Frequency of exercise (times per week)	3.38	1.68	102
Goal progress	3.84	1.34	102

RESULTS

Descriptive Statistics

Table 4 provides descriptive statistics for all of the study variables. All variables were tested for gender and age differences. Men were coded 0 and women were 1. There was a gender difference for doer identification, $t(100) = 2.24$, $p = .03$, with men showing greater doer identification ($M = 5.11$) than women ($M = 4.62$). Therefore, we controlled for gender in our hypothesis tests. There were no interactions involving gender. There were no significant age differences in our sample.

Hypothesis Testing

Again, we hypothesized that doer identification would predict frequency of exercise and attainment of goals, over and above the variance accounted for by the personality constructs of self-esteem and Neuroticism, the motivational constructs of self-concordance and expectancy, and also by participant's gender and previous goal pursuit. We took a similar approach to that of Study 1, using hierarchical regression models to evaluate the effect of entering doer identification at the second step of the regression.

Table 6 shows the results for the two regression models. In the model predicting mean exercise frequency, doer identification accounted for unique variance at the second step, as predicted (at Step 2, $R^2 = .074$, $p < .01$; R^2 for the entire model = .199), $F(7, 94) = 3.33$, $p < .01$. Gender and previous goal pursuit also were marginally significant; none of the other control variables reached significance. In the model predicting mean goal progress ratings, doer identification was nearly significant at the second step (at Step 2, $R^2 = .03$, $p = .059$; R^2 for the entire model = .237), $F(7, 94) = 4.17$, $p < .01$).[4] Previous goal pursuit and expectancy also were significant predictors, and gender was marginally significant. None of the other control variables reached significance.

BRIEF DISCUSSION

The results of Study 2 further support the predictive power of the self-as-doer construct. First, the study replicated the earlier patterns within the specific domain of exercise behavior, showing that doer identification has relevance for particular areas of life that give people trouble. Second, the three-item measure of doer identification increased the reliability of the measure. Third, the self-as-doer was found to predict positive outcomes independently of the personality variables of Neuroticism and self-esteem, as well as the motivational variables of self-concordance and expectancy. The findings concerning Neuroticism, self-concordance, and expectancy replicate those of Study 1, providing assurance that doer-identification effects are not reducible to these important potential alternatives. Fourth, doer identification was found to predict exercise frequency and exercise goal progress even after controlling for a person's previous level of goal pursuit. This indicates that doer identification has positive effects that go beyond one's past experience in a domain; thus, those who can create and adopt such images in the present moment may be able to "go beyond their own past." Finally, the inclusion of a self-reported measure of exercise frequency as an outcome allowed generalization beyond mere Likert ratings of progress.

STUDY 3

Study 3 examined the self-as-doer construct in a very different way than Studies 1 and 2. Rather than measuring the construct as an individual difference variable, we attempted to prime it within an experimental setting. We hoped to show that this motivational resource can be made available or accessible to anyone, not just those who already think of themselves this way. Specifically, we employed a 2 (children's book: *The Little Engine That Could* [Piper, 1986] vs. *Curious George and the Pizza* [Rey & Rey, 1985]) × 2 (writing topic: apply the moral of the story to yourself vs. apply the moral to a close friend) between-participants factorial design to predict participants' persistence in two tiring physical tasks (see below). These two classic children's stories are similar in that both involve the moral of helping others (the Little Engine pulls the toys over the mountain and Curious George manages to deliver the pizza after all). However, the Little Engine story also concerns the

Downloaded from psp.sagepub.com at University of Missouri-Columbia on July 19, 2014

TABLE 5: Study 2: Correlation Table

	1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*
1. Doer identification	1.0								
2. Neuroticism	−.15	1.0							
3. Self-esteem	.19†	−.74**	1.0						
4. Self-concordance	.17†	−.28**	.24*	1.0					
5. Expectancy	.53**	−.15	.11	.23*	1.0				
6. Gender	−22*	.18†	−.16	−.16	−.12	1.0			
7. Previous goal	.24*	−.06	.10	.11	.04	−.20*	1.0		
8. Frequency of exercise	.38**	−.01	.01	.11	.25**	.06	.21*	1.0	
9. Goal progress	.36**	−.03	.14	.10	.32**	.06	.25**	.69**	1.0

†$p < .10$. *$p < .05$. **$p < .01$.

TABLE 6: Results of Hierarchical Regressions Predicting Two Outcomes From Doer Identification and Alternative Constructs

	Exercise Frequency	*Goal Progress*
Doer identification	.34**	.22†
Neuroticism	−.01	.18
Self-esteem	−.07	.21
Self-concordance	.06	.02
Expectancy	.08	.22*
Gender	.18†	.17†
Previous goal	.17†	.22*

NOTE: Coefficients are those that resulted at the second step.
†$p < .10$. *$p < .05$. **$p < .01$.

virtue of persisting at a difficult and tiring behavior, whereas the Curious George story does not directly prime this virtue.

Based on our premise that the self-as-doer construct involves a specific linkage of the self-concept with a behavior (Schlenker et al., 2001), we predicted significant interactions such that the greatest endurance would occur in the condition in which participants read *The Little Engine* and applied the moral to themselves. Because neither factor should have an effect by itself, no main effects were predicted. Such a pattern of results would support our claim that the self-as-doer construct requires a combination of concepts and also suggests that merely making this combination momentarily accessible can have important effects.

METHOD

Participants

Participants were students of the University of Missouri, Columbia, who participated for introductory psychology credit. Fifty-nine students took part; however, 2 respondents gave incomplete data or did not follow instructions. Therefore, the final sample was 57, consisting of 26 men and 31 women.

Procedure

The Web-based sign-up announcement stated that the participant would take part in two short and unrelated studies that were being combined for efficiency. The two studies took place in two separate rooms and were run by different experimenters.

After arriving at the first room, participants were told that the first study concerned their evaluation of various children's stories, which were being assessed to find the most appropriate stories and games for different ages. After signing a consent form, all participants evaluated a word search and a maze that were given to support the cover story. Next, participants read the first story, *Contrary Mary* (Jeram, 1997), and completed questions about it. Then, half the participants read *The Little Engine That Could* (Piper, 1986) and the other half read *Curious George and the Pizza* (Rey & Rey, 1985). This constituted the differential priming factor. Afterward, we asked participants to rate their enjoyment of the stories on a scale of 1 (*not at all*) to 7 (*very much*). Next, participants wrote three short paragraphs about how the second story applied to either themselves or to a close friend in the past, present, and future. This constituted the self versus other factor.

Participants then waited in a hallway until a second experimenter met them and took them to a different room and secured their consent for the second study, titled "physical tasks and exercise habits." Participants first completed a questionnaire containing an assessment of current level of exercise fitness. We intended to use this measure as a covariate to control for differences in participants' strength and conditioning. Then, the experimenter explained two physical tasks: holding a weight above a string for as long as possible and

Downloaded from psp.sagepub.com at University of Missouri-Columbia on July 19, 2014

squeezing a handgrip for as long as possible. Each task was given twice to increase measurement reliability and the two scores were averaged for each task. The order of administration of the two tasks was counterbalanced. Because task order had no effects, it will be ignored in the following discussion.

For the weight-holding task, participants were seated in front of a shoulder-high string and given a weight (3 pounds for men and 2 pounds for women) to hold up above the string with their arm extended straight for as long as they could. The timer was stopped when the participant's arm touched the string. For the hand-grip task, we asked participants to squeeze the grip hard enough to hold a wad of paper between the two ends of the coiled grip. The timer was stopped when the paper fell out of the grip. After twice completing the two tasks, participants were debriefed and dismissed. No participants reported seeing a connection between the two studies.

RESULTS

Manipulation Checks and Preliminary Analyses

First, we conducted manipulation checks by coding participants' responses to the children's stories. As a check of the essay-type manipulation (apply the message to self vs. apply the message to a friend), we counted the number of self words (I & me) that appeared in the essays. There was a significant mean difference in the number of self words for essay type (*M*s = 2.55 words vs. 0.71 words, respectively), $t(55) = 5.58$, $p < .01$. As a check on the story manipulation (*Little Engine* vs. *Curious George*), we counted the participants who said the message of the story concerned persistence and trying hard and the participants who said the message was about correcting mistakes and staying out of trouble. Twenty-one out of 27 *Little Engine* participants mentioned persistence, and 27 out of 30 *Curious George* participants mentioned correcting mistakes. No *Curious George* participants mentioned persistence, and no *Little Engine* participants mentioned correcting mistakes. Thus, the messages from the stories were clear.

Next, we examined the enjoyment ratings for the two stories. There was no difference by story ($M = 4.6$ for *The Little Engine* and $M = 5.0$ for *Curious George*), $t(54) = 1.13$, $p > .20$, indicating that they were found to be equally engaging and interesting by study participants.

Table 7 provides descriptive statistics for the dependent variables of weight-holding and grip-squeezing. Weight-holding and grip-squeezing were significantly correlated ($r = .68$, $p < .01$). Preliminary *t* tests revealed that there were gender differences in both dependent variables such that, on average, men went longer in both tasks. Thus, we include gender as a covariate in the primary hypothesis tests (there were no interactions of gender with the effects reported below).

TABLE 7: Study 3: Descriptive Statistics

	M	*Min*	*Max*	SD
Seconds weight held				
All	131	38	337	61
Men	153	60	337	66
Women	113	38	284	51
Seconds grip squeezed				
All	76	9	201	42
Men	104	43	201	41
Women	52	9	109	25

TABLE 8: Means by Experimental Condition

	Story Prime	
	Curious George	Little Engine
Seconds weight held		
Apply to friend	122 ($n = 15$, $SD = 45$)	132 ($n = 12$, $SD = 57$)
Apply to self	107 ($n = 15$, $SD = 42$)	164 ($n = 15$, $SD = 82$)
Seconds grip squeezed		
Apply to friend	73 ($n = 15$, $SD = 37$)	72 ($n = 12$, $SD = 44$)
Apply to self	63 ($n = 15$, $SD = 31$)	94 ($n = 15$, $SD = 51$)

Hypothesis Tests

Table 8 contains the means for the four cells. Again, we hypothesized that there would be an interaction between story type and essay type, such that those in the *Little Engine* and self-writing condition would persist longest in holding the weight and squeezing the grip. To evaluate this hypothesis, we conducted two 2 × 2 ANCOVAs, one for each dependent measure, in which gender and current exercise level were controlled. For both dependent measures, the highest mean occurred in the predicted cell. This was reflected in significant two-way interactions; for weight-holding, $F(2, 51) = 5.15$, $p = .03$, and for grip-squeezing, $F(2, 51) = 8.49$, $p < .01$. There were no main effects of either experimental factor (all *p*s > .10). The gender covariate was significant in both analyses, $t(51) = -2.47$, $p = .02$, and $t(51) = -6.23$, $p < .01$, respectively, and the exercise-level covariate was significant in the weight-holding analysis, $t(51) = 2.09$, $p = .04$, but not the grip-squeezing analysis, $t(51) = 1.54$, $p > .10$.

Downloaded from psp.sagepub.com at University of Missouri-Columbia on July 19, 2014

To more precisely test our primary hypothesis, for each dependent measure we conducted a planned contrast (following Rosenthal, Rosnow, & Rubin, 2000) in which we compared the *Little Engine*/self-essay cell to the means of the other three cells. Based on our assumption that this condition provides a unique and synergistic motivational resource, we expected the crucial cell to differ significantly from the other three. This was the case for both weight-holding and grip-squeezing, $t(51) = 2.45$, $p = .02$, and $t(51) = 2.04$, $p < .05$, respectively. As another way of testing our hypotheses, we compared the two conditions in which the self was activated, reasoning that the difference between the two stories should be much greater when the self is implicated. As expected, the two self-essay cells differed for both weight-holding, $t(28) = -2.42$, $p < .05$, and grip-squeezing, $t(28) = -1.98$, $p < .05$. None of the other pairwise differences were significant.

Brief Discussion

The Study 3 findings lend further support to the notion that the self-as-doer can be a momentarily accessible variable as well as a chronically accessible individual difference variable by showing that the construct can be primed with appropriate stimuli. Neither experimental factor had a main effect by itself. Instead, the significant interactions supported the idea that this motivational resource emerges only when both the self *and* the behavior are linked (Schlenker et al., 2001).

GENERAL DISCUSSION

These three studies supported the discriminant validity and the functional utility of the self-as-doer construct. To summarize, Study 1 first showed that people are more likely to remember prior goals when they identify themselves more strongly as the doer of those goals. This supports our assumption that doer identities are enduring and chronically salient aspects of the self-concept. Second, and more important, Study 1 showed that doer identification contributes to longitudinal goal attainment and academic performance above and beyond the effects of conventional goal commitment, self-concordance, and expectancy, as well as having effects beyond the alternative personality constructs of Neuroticism and Openness to Experience. These data begin to establish that doer identification provides unique motivational resources that are not addressed or measured by existing self-motivational theories. The fact that doer identification for academic goals taken alone was especially predictive of senior GPA indicates that doer identification can be an important domain-specific as well as domain-general construct.

Following up on this, Study 2 focused on the applied domain of exercise, showing that identifying oneself as the doer of one's exercise goals prospectively predicts Likert ratings of goal attainment. Study 2 also showed that the pattern generalizes to the more behavioral outcome of exercise frequency, although this was a self-report measure as well. In addition, Study 2 showed that doer identification has effects that cannot be accounted for by goal self-concordance and expectancy, by the personality traits of Neuroticism and self-esteem, or by the person's previous experience with the goal. The latter two results in particular suggest that doer identification is more than a mere proxy for past success and personality; instead, it appears that anyone might benefit to the extent they intentionally adopt a doer identification before embarking on a new program of activity. Granted, the results of Study 2 were based on self-report of both exercise frequency and goal progress. Study 3 examines the self-as-doer using a dependent measure that is not self-report.

Study 3's experimental findings further supported this conjecture, showing that behavioral persistence can be increased when appropriate messages are linked with participants' self-concepts. Specifically, participants who both read a story with a moral that concerned resolute action and who applied that moral to themselves were able to persist longest in two physically demanding tasks (weight-holding and grip-squeezing). The significant interactions between the story topic factor (*The Little Engine That Could* and *Curious George*) and the essay topic factor (apply the moral to oneself vs. a close friend) suggest, consistent with our theoretical premises, that linking the self-concept and the concept of persistent activity provides a synergistic resource that represents more than the influence of either factor by itself (Schlenker et al., 1994, 2001).

We believe the functional benefit of doer identification occurs for at least four reasons. First, the doer is more concerned with present action than with achieving a particular end-state; the point is not to arrive at a terminal outcome in the future but, rather, to do something now. Also, the doer defines himself or herself as a dynamic agent rather than as a passive object. The point is not to confirm a static self-image but, rather, to make something happen. In addition, the doer is more concerned with enacting the behavior than enjoying the behavior. This helps the doer to persist in activities that are nonintrinsically motivating or even aversive. Finally, the self-as-doer is not necessarily concerned with demonstrating a desirable identity to others; instead, he wants to demonstrate the identity to himself. Thus, the doer is not easily undermined by considerations of what others will think. As a result of these features, doer identification provides motivational

Downloaded from psp.sagepub.com at University of Missouri-Columbia on July 19, 2014

resources that are more than one's past experience and one's current personality traits.

Although we have emphasized that the self-as-doer is a motivational resource that is potentially available to everyone, it is likely that this habit of mind takes considerable effort and discipline to develop. In other words, even the most devout runner doubtlessly struggles at times to remain in the present rather than looking ahead too much to future outcomes, struggles to enact the identity at times when she is feeling lethargic or uninspired, and struggles to avoid getting caught in social comparisons or merely symbolic forms of self-completion. Also, we do not mean to suggest that doer identifications are always positive and beneficial (i.e., "smoker" and "drug-user" are probably not beneficial). Furthermore, it is doubtlessly possible to take one's doer identity too seriously, such that it becomes an unhealthy or inflexible obsession; Vallerand et al., in press). As acknowledged within the *Bhagavad-Gita* and within other Asian philosophies, "striving diligently without attachment to outcomes" while at the same time maintaining overall balance in one's life is a discipline that can take a lifetime to develop.

The implications of the findings for motivational training programs and interventions seem obvious. In particular, our results suggest that such programs will work best when they (a) focus on the ideal of "persistence no matter what" and (b) encourage participants to concretely apply this message to themselves. Indeed, we believe that many motivational training programs already incorporate elements of the proposed self-as-doer framework. For example, the est (now Landmark) forum emphasizes living proactively out of the "stands" that one takes rather than living reactively out of the results that one gets. A stand, similar to a declaration of the self as a doer, can provide a secure and unshakable platform for action. As another example, Anthony Robbins's (1987) programs for enhancing "personal power" also focus on the ideal of unconditional persistence in one's goals—as long as one does not stop, one can go anywhere.

Future Research Directions

As suggested above, one promising future research direction is to build self-as-doer assessments into existing motivational training programs of all types as one possible means of understanding the relative effectiveness of such programs. From our perspective, programs that focus overmuch on future end-states and incentives rather than on the ideal of maintaining present action may not be as useful. Another research direction will be to design interventions that directly enhance doer identification in participants. Of course, to have long-term effect, such programs will have to do more than merely assign participants to read *The Little Engine That Could* and write three paragraphs about it. Possible intervention strategies might include attributional retraining ("I did it, and will continue to do it, because that's who I am"), journal and diary exercises in which lapses in doer identification are noted or analyzed, and visualization or mental simulation techniques in which people imagine themselves with unshaken motivation, no matter what the circumstances or outcomes.

Another important future research direction will be to evaluate the generalizability of the findings to non-Western cultures. Of course, doer images and injunctions are iconic in Western culture, as embodied by the Protestant ethic, the Horatio Alger story, and *The Little Engine That Could*. In contrast, they may not be so salient and accessible in non-Western cultures (Markus, Kitayama, & Heiman, 1996). Thus, it remains to be seen if doer identification can have the same types of positive effects in non-Western cultures.

Limitations and Conclusions

Of course, these studies have limitations. For the most part, they relied on college students (although Study 2 also included university employees of varied ages); further work will be required to confirm the robustness of the effects in different age groups. Also, the assessment of doer identification employed in Studies 1 and 2 was in some cases awkward because participants sometimes generated "er" phrases that sounded strange and were doubtless difficult to identify with. Future work could refine the assessment so that the central idea, concerning participants' identification with sustained activity itself, is measured more adroitly. Finally, other applied and health-relevant domains need to be examined besides that of persistent exercise and physical effort. Such domains include, but are not limited to, diet adherence, medication compliance, and smoking cessation.

Despite these limitations, we believe that the present results are quite promising, demonstrating the potential importance of the self-as-doer construct. As discussed earlier, this idea appears to be lacking in the existing self-motivational literature and thus may fill a gap in this literature. In particular, the construct may help us to better understand the initial example mentioned in the introduction—the runner who runs even on days she does not feel like it. We could all stand to develop this propensity to a greater extent, in whatever domains are important to us.

NOTES

1. The triangle model also states that behavior is facilitated when prescriptions and particular events are linked and when identity and particular events are linked, the second and third vertices on the

Downloaded from psp.sagepub.com at University of Missouri-Columbia on July 19, 2014

triangle. These other two types of linkage are not relevant to the current model.

2. This gender imbalance reflects the gender ratio of the initial sample; because ancillary analyses revealed that there were no main or interactive effects of gender on the primary outcomes, we omit further discussion of gender in Study 1.

3. Data from this sample were reported by Sheldon and Houser-Marko (2001). The current study addressed a different set of questions than did Sheldon and Houser-Marko (2001). None of the variables (except self-concordance) used in this study were used in the prior study.

4. Notably, the *p* for the doer-identification effect dropped to less than .05 when any one of the control variables were omitted from the equation (except for gender). We have included all of these control variables in the report to most fully inform the reader of the scope of the effect.

REFERENCES

Bandura, A. (1997). *Self-efficacy: The exercise of control*. Stanford, CA: Stanford University.

Bandura, A. (1989). Self-regulation of motivation and action through internal standards and goal systems. In L. A. Pervin (Ed.), *Goal concepts in personality and social psychology* (pp. 19-85). Hillsdale, NJ: Lawrence Erlbaum.

Bargh, J. A., & Ferguson, M. L. (2000). Beyond behaviorism: On the automaticity of higher mental processes. *Psychological Bulletin, 126*, 925-945.

Brunstein, J. (1993). Personal goals and subjective well-being: A longitudinal study. *Journal of Personality and Social Psychology, 70*, 395-407.

Costa, P. T., Jr., & McCrae, R. R. (1992). *NEO-PI/FFI manual supplement*. Odessa, FL: Psychological Assessment Resources.

Deci, E. L., & Ryan, R. M. (1985). *Intrinsic motivation and self-determination in human behavior*. New York: Plenum.

Deci, E. L., & Ryan, R. M. (2000). The "what" and "why" of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry, 11*, 227-268.

Fortunato, V. J., & Goldblatt, A. M. (2002). Construct validation of revised Strain-Free Negative Affectivity Scale. *Educational and Psychological Measurement, 62*, 45-63.

Gollwitzer, P. M., & Brandstatter, V. (1997). Implementation intentions and effective goal pursuit. *Journal of Personality and Social Psychology, 73*, 186-199.

Gollwitzer, P. M., Fujita, K., & Oettingen, G. (2004). Planning and the implementation of goals. In R. F. Baumeister & K. D. Vohs (Eds.), *Handbook of self-regulation: Research, theory, and applications* (pp. 211-228). New York: Guilford.

Higgins, E. T. (1990). Personality, social psychology, and person ± situation relations: Standards and knowledge activation as a common language. In L. A. Pervin (Ed.), *Handbook of personality: Theory and research* (pp. 301-338). New York: Guilford.

Jeram, M. (1997). *Contrary Mary*. Cambridge, MA: Candlewick Press.

Markus, H., Kitayama, S., & Heiman, R. (1996). Culture and basic psychological principles. In E. T. Higgins & A. W. Kruglanski (Eds.), *Social psychology: Handbook of basic principles* (pp. 857-913). New York: Guilford.

Marsh, H. W., Parada, R. H., & Ayotte, V. (2004). A multidimensional perspective of relations between self-concept (Self-Description Questionnaire II) and adolescent mental health (Youth Self-Report). *Psychological Assessment, 16*, 27-41.

McCrae, R., & Costa, P. (1990). *Personality in adulthood*. New York: Guilford.

Mroczek, D. K., Spiro, A., Aldwin, C. M., & Ozer, D. J. (1993). Construct validation of optimism and pessimism in older men: Findings from the normative aging study. *Health Psychology, 12*, 406-409.

Piper, W. (1986). *The little engine that could*. New York: Platt & Munk. (Original work published 1930)

Rey, M., & Rey, H. A. (1985). *Curious George and the pizza*. New York: Houghton Mifflin.

Robbins, A. (1987). *Unlimited power*. New York: Fawcett Columbine.

Rosenberg, M. (1965). *Society and the adolescent self-image*. Princeton, NJ: Princeton University Press.

Rosenthal, R., Rosnow, R. L., & Rubin, D. B. (2000). *Contrasts and effect sizes in behavioral research: A correlational approach*. Cambridge, UK: Cambridge University Press.

Schlenker, B. R., Britt, T. W., Pennington, J., Murphy, R., & Doherty, K. (1994). The triangle model of responsibility. *Psychological Review, 101*, 632-652.

Schlenker, B. R., Pontari, B. A., & Christopher, A. N. (2001). Excuses and character: Personal and social implications of excuses. *Personality and Social Psychology Review, 5*, 15-32.

Sheldon, K., & Elliot, A. J. (1999). Goal striving, need satisfaction, and longitudinal well-being: The self-concordance model. *Journal of Personality and Social Psychology, 76*, 482-497.

Sheldon, K. M., & Kasser, T. (2001). Getting older, getting better? Personal strivings and psychological maturity across the life span. *Developmental Psychology, 37*, 491-501.

Sheldon, K. M. (2002). The self-concordance model of healthy goal striving: When personal goals correctly represent the person. In E. L. Deci & R. M. Ryan (Eds.), *Handbook of self-determination research* (pp. 65-86). Rochester, NY: University of Rochester Press.

Sheldon, K. M., & Houser-Marko, L. (2001). Self-concordance, goal attainment, and the pursuit of happiness: Can there be an upward spiral? *Journal of Personality & Social Psychology, 80*, 152-165.

Sheldon, K. M., Williams, G., & Joiner, T. (2003). *Self-determination theory in the clinic*. New Haven, CT: Yale University Press.

Thoreson, C. J., Bradley, J. C., Bliese, P. D., & Thoreson, J. D. (2004). The big five personality traits and individual job performance growth trajectories in maintenance and transitional job stages. *Journal of Applied Psychology, 89*, 835-853.

Vallerand, R., Blanchard, C., Mageau, G., Koestner, R., Ratelle, C., Leonard, M., et al. (in press). Les Passions de l'Ame: On obsessive and harmonious passion. *Journal of Personality and Social Psychology*.

Wood, W., & Quinn, J. M. (2005). Habits and the structure of motivation in everyday life. In J. P. Forgas & K. D. Williams (Eds.), *Social motivation: Conscious and unconscious processes* (pp. 55-70). New York: Cambridge University Press.

Wood, W., Tam, L., & Witt, M. G. (in press). Changing circumstances, disrupting habits. *Journal of Personality and Social Psychology*.

Received June 8, 2005
Revision accepted January 31, 2006

Downloaded from psp.sagepub.com at University of Missouri-Columbia on July 19, 2014